



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

14

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|-------------------------|
| 10/085,175 | 02/27/2002 | Barry Lynn Butler | | 1719 |
| 7590 | 06/03/2005 | | EXAMINER | |
| Dr. Barry Lynn Butler 980 Santa Estella Solana Beach, CA 92075 | | | BASICHAS, ALFRED | |
| | | | ART UNIT | PAPER NUMBER |
| | | | | 3749 |
| | | | | DATE MAILED: 06/03/2005 |

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) |
|------------------------------|------------------------|---------------------|
| | 10/085,175 | BUTLER, BARRY LYNN |
| Examiner | Art Unit | |
| Alfred Basichas | 3749 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 21 December 2004.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-3 and 5-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-3 and 5-12 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 03 June 2004 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____.

DETAILED ACTION

1. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

A listing of registered patent attorneys and agents is available on the USPTO Internet web site <http://www.uspto.gov> in the Site Index under "Attorney and Agent Roster." Applicants may also obtain a list of registered patent attorneys and agents located in their area by writing to the Mail Stop OED, Director of the U. S. Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450

Drawings

The drawings received on June 3, 2004, have overcome the objections thereto.

Specification

The substitute specification filed December 20, 2003, has not been entered because it does not conform to 37 CFR 1.125(b) because it was not accompanied by a statement that the substitute specification includes no new matter. Since the substitute specification has not been entered, the objections with respect to the specification from the previous office action have been maintained.

MPEP 2163.06 describes "new matter" as follows: "If an applicant amends or attempts to amend the abstract, specification or drawings of an application, an issue of new matter will arise if the content of the amendment is not described in the application as filed. Stated another way, information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter."

The amendment filed June 3, 2004, is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: By way of example, the diameter of the fluid carrying tubes being 3/8 inch, the clam shell split pipe external

covering, and the addition of the fill/drain valves are not supported by the disclosure as filed.

Applicant is advised that in order to avoid the addition of new matter, he should not use amendment practice to rewrite his specification. Of course, he can make grammar corrections. However, all other amendments must conform to the drawings/specification as filed. Any changes should be made carefully to avoid the addition of prohibited new matter.

The disclosure is objected to because it is replete with informalities. For example: On page 3, line 12, "buy" should be "by." On page 3, line 18, "loosing" should be "losing." On page 5, line 8 from the bottom, "who's" should be "whose." Appropriate correction of **all** such informalities is required.

The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claim 3 is objected to because of the following informalities: In claim 3, line 3, "**systems**" should be "**system's**." Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3 and 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. In claim 1, 2nd line, the parentheses must be removed, as it is unclear whether the water to steam phase change is being claimed. Further, in order to avoid a further rejection if the parentheses were meant to show an example, applicant is advised that the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
- b. In claim 2, 7th line, there is no antecedent basis for "the pressurized fluid loop."
- c. In claim 2, 9th line, there is no antecedent basis for "the circulating heat transfer fluid."
- d. In claim 2, 9th line, there is no antecedent basis for "the hot water tank."

Applicant is advised that the mention of the element in claim 1 does not provide antecedent basis for the same element in claim 2, as claim 2 does not depend from claim 1 as it is an independent claim.

- e. In claim 3, 6th and 7th line, there is no antecedent basis for "the circulating heat transfer fluid."
- f. In claim 3, 7th line, there is no antecedent basis for "the hot water tank."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Goto et al.

(JP 59-93149 A).

Goto et al. discloses the invention as claimed including a boiling gas/liquid separator 9 and a filler tube 10 to return the condensed water to the fluid loop.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Embree (US 4269167) in view of Scharfman (US 4043317), Sigworth, Jr. (US 4413615), and Zinn (US 4399319).

g. Embree discloses the invention substantially as claimed including a pressurization system (col. 5, lines 54 - col. 6, line 2), said pressurization system

prevents boiling and is thus an overheat protection system as discussed in the section of the specification listed above, means to prevent damage from freezing by drainage (col. 2, lines 54-56), and means to deliver heat (return line 14).

- h. Embree does not disclose a fluid radiator/overflow/recovery apparatus, an antifreeze heat transfer fluid, a flexible umbilical, and a double walled internal heat exchanger.
- i. Scharfman discloses a solar panel having an overheat protection system including dampers 28a,30a to permit cool air circulation to maintain the temperature of the collector.
- j. Sigworth, Jr. discloses a solar energy system and teaches the use of an antifreeze heat transfer fluid (see the abstract) and a double walled internal heat exchanger 18 for the purpose of preventing freezing of the heat transfer fluid and preventing leaking of the heat transfer fluid. See column 5, lines 28-49.
- k. Zinn discloses an umbilical assembly, which carries and insulates (outer jacket 14 is insulative) a heat transfer fluid and includes conductors 13,13A for making electrical circuits.
- l. Thus, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to provide the solar energy system of Embree with the an overheat protection system including dampers as taught by Scharfman to permit cool air circulation to maintain the temperature of the collector, an antifreeze heat transfer fluid and a double walled internal heat exchanger as

taught by Sigworth, Jr. for the purpose of preventing freezing of the heat transfer fluid and preventing leaking of the heat transfer fluid, and the umbilical assembly taught by Zinn for the purpose of insulating the heat transfer fluid and carrying conductors.

4. Claims 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Embree (US 4269167) in view of Scharfman (US 4043317), Sigworth, Jr. (US 4413615), and Zinn (US 4399319), which teach substantially all of the claimed limitations as discussed above. Nevertheless, the above combination does not specifically recite the specific type of pump and controller claimed. Yet, it is clear from applicant's claiming of two different types of pumps, that there is no real criticality as to the use of one or the other. The selection of a particular type of pump is an obvious modification based on design choice, and depends on availability, cost, and desired capacity. In view of the absence of criticality for this particular element, it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated it into the invention disclosed by the above combination, so as to provide for availability, cost, and desired capacity.

Response to Arguments

With respect to the Goto et al. reference, it appears that applicant's arguments only relate this reference as it applies to claim 1. Claim 1, as amended was rejected over a combination of references. The other references applied teach the features,

which Goto et al. does not.

Embree was one of those references applied in combination with Goto et al. against claim 1. Applicant argues, with respect to Embree, that it does not show all of the features of his system. Once again, it is noted that claim 1, as amended was rejected over a combination of references. The other references applied teach the features, which Embree does not.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the Zinn reference fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (e.g., polymer separators) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alfred Basichas whose telephone number is 571 272

4871. The examiner can normally be reached on Monday through Friday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571 272 4877. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center telephone number is 571 272 3700.

May 31, 2005



Alfred Basichas
Primary Examiner